Comparing NAEP and ITBS Results

Recently articles have been released that compare the results on the National Assessment of Educational Progress (NAEP) with the results on state tests. In Iowa this means a comparison of the NAEP results with ITBS at grades four and eight in reading and mathematics. Unfortunately, many of the articles have tried to use a "point by point" comparison which has led to incorrect results and misunderstandings (Table 1). This is similar to comparing the percent proficient on ITBS in a district to the percent of students passing another district assessment such as a MIALT or ICAM assessment.

Table 1: Percent of Iowa Students Scoring at Designated Cut Points on ITBS and NAEP

	Iowa Biennium 2003-	Iowa 2005 NAEP	Iowa 2005 NAEP
	2005 ITBS Percent	Percent Scoring	Percent Scoring
	Intermediate or Above	Basic or Above	Proficient or Above
Grade 4 Reading	78	67	33
Grade 8 Reading	71	79	34
Grade 4 Mathematics	79	85	37
Grade 8 Mathematics	74	75	34

The National Assessment Governing Board (NAGB) sets policy for all aspects of NAEP. In 2002, NAGB appointed an Ad Hoc Committee to study how NAEP could correctly be used to confirm state test results. The committee report, *Using the National Assessment Educational Progress to Confirm State Test Results*, states, "Informed judgment and a 'reasonable person' standard should be applied in using National Assessment data as confirmatory evidence for state results. Confirmation should not be conducted on a 'point by point' basis or construed as a strict 'validation' of the state's test results (p.8)."

One of the problems is a pervasive confusion about the meaning of the terms basic, proficient and advanced as states use them and the terms *Basic*, *Proficient*, and *Advanced* as NAEP uses them. Another NAEP validity study concluded that generally the NAEP *Basic* performance level is the most comparable statistic with a state's "proficient" performance level (intermediate) established to report adequate yearly progress (AYP) as required by the No Child Left Behind Act (Mosquin and Chromy, 2004).

In addition, major differences between NAEP and state tests also need to be explored and reported as part of any analysis. Some of the potential differences of concern between NAEP and a state test include:

- content coverage in the subjects,
- sequencing of content in the subjects,
- definitions of subgroups,
- changes in the demography within a state over time,
- sampling procedures and rules for excluding students from testing.
- standard-setting approaches,
- reporting metrics,
- student motivation in taking the state test versus taking NAEP,
- teacher/principal expectations for students participation in state tests and NAEP,
- mix of item formats (multiple choice, short answer, and constructed response),
- test difficulty,
- method of presentation (computer or pencil-and-paper),
- tools available for use during the test (dictionary, calculator, etc.),
- whether or not the test is timed, and etc.

These potential differences may be minimal or large in number and in size. The differences cannot reasonably be expected to operate in all states in equal fashion. "The greater the differences between a state test and NAEP, the greater the complexity in using NAEP as confirmatory evidence for the state's test results, and the greater the cautions in interpretation that should accompany the confirmatory evidence (p.9)." In Iowa, the differences between NAEP

and ITBS are considerable. For example, ITBS is a battery of norm-referenced multiple choice tests given to almost all students in grades three through eight with scores based on the number of correct answers. NAEP is an assessment containing multiple choice and constructed response questions given to a sample of students in grades four and eight with scoring based on item response theory (IRT). The assessments overlap in content, but are not aligned. Additional information is available at http://www.state.ia.us/educate/ecese/nclb/assessments.html or contact Dianne Chadwick at (515) 281-3718 or dianne.chadwick@iowa.gov.